

1   What is claimed is:

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3           1. A multiplex transmission apparatus for  
4   receiving a first multiplexed signal comprising a first  
5   payload having a plurality of main signals multiplexed  
6   therein and a first overhead including a plurality of  
7   first maintenance information associated with  
8   administration and maintenance operations, performing  
9   termination processing for said first maintenance  
10  information and transmission processing for the main  
11  signals in said first payload, thereafter converting said  
12  first multiplexed signal into a second multiplexed signal  
13  comprising a second payload having multiplexed therein  
14  said main signals which have been processed for  
15  transmission, and a second overhead bytes including a  
16  plurality of second maintenance information associated  
17  with the administration and maintenance operations, said  
18  second maintenance information to be output to a far end  
19  communication apparatus, and transmitting said second  
20  multiplexed signal; comprising:  
21       an extraction circuit for extracting predetermined  
22  maintenance information from said first maintenance  
23  information;

1        a cross-connecting circuit for cross-connecting  
2 information extracted by said extraction circuit; and

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4        insertion circuit means for inserting an output of  
5 said crossconnecting circuit into a predetermined  
6 location in said second overhead bytes,

7        wherein said predetermined maintenance information  
8 in said first multiplexed signal is transferred to said  
9 second multiplexed signal.